

THE HEART BEAT



By Dr. Omid Kohani

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What is Aortic Stenosis?

A few months ago, Barbara Walters underwent successful open-heart surgery to replace her heart's Aortic valve due to "Aortic Stenosis." Perhaps you have not heard of this condition but it is not uncommon these days given that we are living longer and this condition is more prevalent in the ages beyond the 70s.

This condition is due to tightening or narrowing of the valve, which opens with every heart beat when the heart pumps blood to the body. The valve has normally thin pliable three leaflets but with aging, calcium deposits on the leaflets and make them thick, restricted and the orifice of the valve becomes smaller.

Other predisposing factors also include childhood acute rheumatic fever and congenital heart disease with respect to a bicuspid aortic valve, which contains just two leaflets. Patients with bicuspid Aortic valve manifest Aortic stenosis in their 40s and 50s.

Regardless of the cause, Aortic stenosis results in decreased blood supply to the body with each heartbeat. Symptoms are more evident as such people exert themselves and experience either, or combination of, shortness of breath, chest pain, tightness of chest, dizziness, and in extreme cases fainting. Congestive Heart Failure (CHF) and arrhythmias, particularly Atrial Fibrillation or irregular heart beat, may also occur.

Typically Aortic valve stenosis is discovered in few circumstances. Symptoms as above may alert the treating doctor to evaluate for such condition or a specific murmur is heard that warrants further evaluation. The diagnostic noninvasive tool is echocardiogram, which stratifies the degree of stenosis. Incidentally, Aortic valve stenosis may be discovered on an echocardiogram when it is done for other purposes.

It's important to know the accurate degree of stenosis, which

dictates the treatment route. If the stenosis is mild or moderate, then medical therapy and periodic echocardiogram surveillance is usually done. If the Aortic valve is severely tight and symptoms are present then the standard approach is valve replacement with open-heart surgery.

There are two main types of valves: Mechanical valves and tissue valves, which are taken from a cow or pig. The advantage of the mechanical valves is longer durability and hence is usually used for younger patients. The disadvantage is that patients with such valves require lifetime and committed blood thinners such as Coumadin to prevent clot formation on the valve. The tissue valve does not require long-term blood thinners but have a shorter lifespan and, therefore, is used for older patients.

Patients with prosthetic Aortic valves are more prone to infection of the valve, which does have significant consequences. Attentions are given to treat any infections promptly to prevent spread to the valve and antibiotics should be given prior to a visit to the dentist.

New innovations are underway for the perfection of less invasive Aortic valve replacement, which are done through the artery without having open-heart surgery. This requires an experienced operator and certain patient selection. Long-term outcome of such procedures are still unknown.

After 50 years of cardiac surgery for replacement of heart valves, many people have lived their life longer and have achieved better quality of life.

Barbara Walters, after open-heart surgery for Aortic valve replacement, was back to "The View" after only two months. Her new valve has given her insurance for longer life; a life for which she enjoys reporting to us from around the world and her interviews with her eloquent speech.